

Air War College

Air University

CLAIRE LEE CHENNAULT: MILITARY GENIUS

by

Philip N. Brown

Lt Colonel, USAF

**A RESEARCH PAPER SUBMITTED TO THE FACULTY IN
FULFILLMENT OF THE CURRICULUM REQUIREMENT**

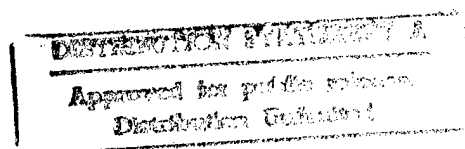
Advisor: Colonel Donald Waddell

MAXWELL AIR FORCE BASE, ALABAMA

April 1995

DTIC QUALITY INSPECTED 8

19970821 034



New Text Document.txt

18 AUGUST 97

This paper was downloaded from the Internet.

Distribution Statement A: Approved for public release;
distribution is unlimited.

POC:

AIR WAR COLLEGE
AIR UNIVERSITY
MAXWELL AFB, AL 36112

JK

DISCLAIMER

This study represents the views of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force. In accordance with Air Force Regulation 110-8, it is not copyrighted, but is the property of the United States government.

Loan copies of this document may be obtained through the interlibrary loan desk of Air University Library, Maxwell Air Force Base, Alabama 36112-5564 (telephone [334] 953-7223 or DSN 493-7223).

ACKNOWLEDGMENTS

The author wishes to acknowledge members of the American Volunteer Group, the 23rd Fighter Group, the 16th Fighter Squadron, 74th Fighter Squadron, 75th Fighter Squadron, 76th Fighter Squadron, and 14th Air Force for their assistance in researching this paper. Specifically, General Bruce Holloway, David "Tex" Hill, Charlie Cook, Sully Barrett, Ben Benetis, Ed Bolen, Joe Brown, J. D. Bullard, Tom Cotton, Al Gendreizig, Chuck Glanville, Bryan Glass, Art Goodworth, Jasper Harrington, J. L. Lee, Myron Levy, Bob Liles, Wallace Little, Phil Loofbourrow, Don Lopez, Clark Manning, Lou Minella, Earl Nash, Don Quigley, John Rosenbaum, Dick Rossi, David Rust, Joe Summey, and Lou Weber were most generous with their time in providing the author with personal and telephone interviews, personal letters and remembrances, video and audio tapes, and books and papers on and about Claire Lee Chennault. Without everyone's assistance and insight, this paper would not have been possible.

ABSTRACT

TITLE: Claire Lee Chennault: Military Genius

AUTHOR: Philip N. Brown, Lieutenant Colonel, USAF

The military genius is a rare and valued individual. Carl von Clausewitz wrote extensively on the necessity for and determinants of the military genius. Specifically he wrote of the need for an inquiring mind, a comprehensive approach, and a calm head. Claire Lee Chennault lived during a time when these qualities of genius were critically important to the United States. This paper examines Chennault's actions within Clausewitz's definition and explores the reactions of those around him during his life.

BIOGRAPHICAL SKETCH

Lieutenant Colonel Philip N. Brown (B. A., University of Miami; M. S., University of Southern California) has been interested in the history of Claire Lee Chennault and the Flying Tigers since being assigned to the 23d Tactical Fighter Wing "Flying Tigers" in 1989. He served with the Flying Tigers as Assistant Operations Officer, 76th Fighter Squadron, and as Operations Officer and Commander of the 75th Fighter Squadron. He is a graduate of Air Force Command and Staff College. Lieutenant Colonel Brown is a graduate of the Air War College, class of 1995.

TABLE OF CONTENTS

DISCLAIMER	2
ACKNOWLEDGMENTS	3
ABSTRACT	4
BIOGRAPHICAL SKETCH	5
CHAPTER I: INTRODUCTION	7
CHAPTER II: BACKGROUND	8
CHAPTER III: THE INQUIRING MIND	11
CHAPTER IV: THE COMPREHENSIVE APPROACH	17
CHAPTER V: THE CALM HEAD	25
CHAPTER VI: THE BIG QUESTION	30
CHAPTER VII: CONCLUSION	34
ENDNOTES	48
BIBLIOGRAPHY	53

CHAPTER I

INTRODUCTION

Claire Lee Chennault rose from his humble Louisiana beginnings to a leadership position of military significance in the days immediately leading to and during World War II. This man clearly saw the importance of airpower in the world and the path necessary to ensure its success. His leadership during peace and war provided the light by which military forces carried out their tasks. Winston Churchill's first meeting with Chennault prompted the Prime Minister to say, "God Almighty, I am glad he is on our side."¹ This comment, although based solely on Churchill's view of Chennault's chiseled face and determined look, was exactly on the mark. Carl von Clausewitz would have echoed Churchill's comment, because Chennault's stoic exterior partially shielded the genius within.

Clausewitz's book, *On War*, establishes a template for leadership characteristics. In particular, his chapter on military genius defines the traits an individual must possess and demonstrate to be a leader of greatness. He states:

*If we then ask what sort of mind is likeliest to display the qualities of military genius, experience and observation will both tell us that it is the inquiring rather than the creative mind, the comprehensive rather than the specialized approach, the calm rather than the excitable head to which in war we would choose to entrust the fate of our brothers and children, and the safety and honor of our country.*²

Claire Lee Chennault's life and actions fit within the criteria defined above. His thoughts and deeds provide an opportunity to assess his leadership against Carl von Clausewitz's discussion of military genius. This paper takes a brief look at the details of Chennault's life, examines his actions in light of Chennault's Clausewitzian life, and finally examines his career against the Clausewitzian framework of military genius. After looking at the three qualities deemed so important by Clausewitz, the paper will examine why Chennault's genius was not fully respected or appreciated prior to his days in China. The scope of this paper prohibits any attempt to cover Chennault's entire life or all his accomplishments. Rather, for brevity, it provides a short look at the specific determinants of genius. Finally, this look at Chennault will be viewed not only through the words of those who wrote about him, but also through his words and those of the men he commanded.

CHAPTER II

BACKGROUND

Chennault was born in Commerce, Texas, in September 1890. He possessed a curiosity for all things about him but, more importantly, his natural gift as a teacher emerged very early. He went on to study and teach mathematics, engineering, and physics at Louisiana State University and the Louisiana Normal School.³ These studies and teachings provided a foundation for his significant works later. Chennault recognized several character traits emerging as he grew older. He realized he "was quick of mind and would rather lead than follow, ...could teach more happily than be dominated, ...and control fear more effectively than most."⁴ A young Chennault added a simple "fight for the right" philosophy of life which, according to a biographer, "aroused a loyalty and respect that went beyond the ordinary dimension of leadership."⁵ These qualities were to serve him well in the military.

As fighter aircraft entered the arena in the days of World War I, Claire Chennault's eyes turned skyward. According to Martha Byrd's comprehensive study, "The pursuit pilots became Chennault's heroes. He may have thought or dreamed of flight earlier, but his long love affair with the fighter plane began during World War I." Chennault's early experiences with aircraft "...fired him with enthusiasm, for flight presented both challenge and excitement, an opportunity for glory and romance...."⁶ Unfortunately, the Air Corps rejected his first application for flight training, along with half the other applicants. Fortunately, they accepted his application for officer training and his military career began.

During testimony before the House Un-American Activities Committee of the United States Congress, Chennault was asked to summarize his career for the members. He answered, "...US Army 1917 to 1937; aviation advisor to Generalissimo Chiang Kai-shek during World War II..."⁷ Chennault's comments certainly cover a great span of his life with few words but do no justice to his actual deeds and accomplishments.

Chennault continued applying for flight training even though he continued receiving rejection notices. He deemed aviation the place where "man's courage, skill, and technique were constantly pitted against death."⁸ Although rejected for formal training, he found aviation during these early days lacked significant

security and procedure. As a result, Chennault secretly began taking flying lessons. Finally, the Air Corps accepted his application for flight training.⁹ He successfully completed the program and won his wings in April 1919.¹⁰ After a short break in service, when he studied aeronautical engineering, he entered pursuit aviation training with a solid educational background for his future studies.

Chennault graduated at the top of his advanced pursuit training class. He was described as "the ideal pursuit pilot with split second reflexes and a shrewd fast-working mind."¹¹ Somehow, however, his performance did not impress his commanding officer, Major Carl Spaatz, who wrote in Chennault's record that "with such a large family he would probably be too timid to fly pursuit."¹² Undaunted by these words, Chennault continued to learn and refine his flying skills and developed an extreme interest in aerobatics. Refining his skills every day, he eventually began putting on aerobatic demonstrations and barnstorming shows.¹³

While commanding the 19th Pursuit Squadron in Hawaii, Chennault initially developed his interest in tactics and experimentation. He used this period of his career to evaluate the dogfighting tactics from World War I and formulate his theories.¹⁴ He spent this time consumed with "flying grueling tests all day and at night studying the science of pursuit." By his return from Hawaii he was an authority in the field.¹⁵

Immediately upon return from Hawaii, Chennault was stationed at Brooks Field. He served in a series of positions culminating as the director of primary and basic training. He used these years to "...consolidate his strengths and to gain experience in teaching and administration."¹⁶ Again according to Ms. Byrd, during this time "he had begun to sense that he carried two handicaps to his future Air Corps career: he had neither served abroad during World War I nor attended West Point. He sought to overcome both deficiencies by sheer dedication to his profession."¹⁷ These skills were to serve him well later.

His significant opportunity arrived in 1930 when selected to study at the Air Corps Tactical School (ACTS) at Langley Field and remained as an instructor when it moved to Maxwell Field.¹⁸ His zeal for pursuit led his superiors to send him to ACTS to "get the rebel properly indoctrinated" and kept on as an instructor so "he would maintain the dignity of the teaching profession and tend toward a degree of conformity."¹⁹ Additionally, while at ACTS "...his convictions and professional qualifications were recognized by his assignment to be the school's pursuit instructor."²⁰ Further, he "developed an international reputation as the champion of pursuit aviation."²¹

Chennault determined the best classroom at ACTS to prove his theories was in the air. During this time he expanded his airborne classroom to a three aircraft aerobatic team called "The Three Men on a Flying Trapeze." This allowed him to use his team as a test bed for the development of his tactics. Chennault developed simple criteria for winning a place on his team - wingmen were selected by their ability to maintain correct formation position during one half hour of Chennault's violent aerobatic maneuvering in the lead aircraft.²² Chennault and his team helped refine many of the ideas he would employ later.

The Air Corps and ACTS of the interwar years rebuffed Chennault's ideas because they did not conform to the bomber doctrine espoused at the time.²³ (Also, see Chapter 6 for additional discussion) Unfortunately, he had the misfortune of being right about aviation when stronger factions of the Air Corps were wrong. As a result, he ended up being humiliated and insulted by his superiors and eventually denied promotion.²⁴ By the time he left the Army in 1937 Chennault was "glad to get out" because "they're still running it with 1917 - 1918 ideas."²⁵

Far from fading into the retirement sunset, Chennault accepted a position with the Chinese government to help with their air force and run their pursuit training.²⁶ From this seemingly small position in China, he went to organize and train not only the Chinese but also the American Volunteer Group which became the world famous "Flying Tigers." After July 1942, Chennault stayed on with the Army Air Corps to continue his fight and to command the China Air Task Force and eventually the 14th Air Force.

Throughout his entire time in China, Chennault enjoyed a special and unique relationship with Generalissimo Chiang Kai-shek. The Generalissimo felt so strongly about Chennault's qualifications that he sent the following message to Chennault in December 1944.

*I hereby appoint you to be Commander of the Air Force, China Theater. You are empowered to exercise command over all Air Forces in the Theater, and cooperate with the military and naval units in their war efforts against Japan. I am confident that with your sound judgment and brilliant record you will be able to deal the enemy a mortal blow and compel him to kneel down and surrender.*²⁷

Chennault completed his military tour in China and his military service as the Commander, 14th Air Force, shortly before the Japanese surrender in the Pacific theater.

This brief glimpse of Chennault's life leading up to the eve of and during World War II provides the stepping stone to a Clausewitzian examination of his mind.

CHAPTER III

THE INQUIRING MIND

The first element of Clausewitz's framework for genius focuses on the inquiring mind. While his definition does not specifically couple individual characteristics with each type of mind, several associations comfortably fit. The inquiring mind must look externally and internally to formulate a vision. Clausewitz describes possessing the characteristics of first, coup d'oeil and second, determination as a necessity of genius. The Clausewitz discussion of military genius identifies these two qualities as indispensable, emphatically stating the necessity for the mind to possess "first, an intellect that, even in the darkest hour, retains some glimmerings of the inner light which leads to truth; and second, the courage to follow this faint light wherever it may lead."²⁸

These qualities of coup d'oeil and determination allow the inquiring mind to "see" a vision and have the strength to see it through. The inward reflection described fits well with the idea of an inquiring mind since questioning oneself and the surrounding world or environment leads to a clear conceptualization of an idea. Nothing could better describe an inner light or vision in a dark hour or determination to pursue this idea as did Chennault's vision of airpower during the period dominated by bomber doctrine thinking.

Chennault's writings in the thirties clearly showed his vision of the next war and how he truly labored in preparation for that war.²⁹ Chennault viewed the medium of air as an unlimited medium. His reflections devised solutions to airborne problems irrespective of the perceived conventional approaches.³⁰ He believed in a balanced air force, not one solely of bomber or pursuit aircraft.³¹ (1:402) He wrote with concern that "the new air arm offers the greatest possibility for unpreparedness because of a lack of appreciation and true evaluation of its technical elements and an accurate conception of its tactical and strategic power...."³² In his text *Pursuit Aviation*, Chennault wrote "...bombardment missions will be of paramount importance and pursuit will cooperate to the limit of its range in executing these missions."³³

Obviously, he perceived bombardment to be a significant issue, but he felt the writers of the time sought to believe exclusively in the invincibility of bombardment. Chennault pointed out the articles on bomber invincibility "illustrate the author's lack of acquaintance with modern pursuit methods, firepower, and

technique rather than any inherent weakness in pursuit.”³⁴ He further states in *Pursuit Aviation*, “new theories and methods should be warmly welcomed but should not be accepted in lieu of proven principles until the new has conclusively demonstrated its superiority over the old.”³⁵ He appeared ready to work with the bomber advocates but cautions them to maintain faith in the pursuit principles present since World War I. Chennault goes on to say defensive pursuit alone cannot stop the bombers from reaching some targets. There must be a coordinated effort between “anti-aircraft guns, passive defensive measures, ...and the counter-offensive.”³⁶

Chennault’s concepts on this air defense system and the requirements for its successful outcome demand additional attention. He clearly saw its success dependent on carrying out three phases: detecting and reporting; interception by pursuit; and destruction or repulse of the invaders.”³⁷ Chennault established a radio-telephone-telegraph network to satisfy the first criteria. The specifics of that system will be explored in this chapter. He engaged all his skills as a teacher to carry out the second phase, and will be a subject of further discussion in the next chapter. Finally, as a result of his success in the first two phases, the third became a matter of fact.

An examination of the detection and reporting networks further reveal the result of his inquiring mind. The idea of an early warning net was certainly not new. Obviously, scouts and calvary had been used as well as other techniques to provide notification of an enemy’s advance. However, the introduction of these newer aircraft speeds demanded some new thinking. This led Chennault to the development of a far reaching system with an inherent communication network.”³⁸

Chennault’s concept resulted from his counter arguments to the bomber doctrine disciples. He determined the reason pursuit aircraft had difficulties in acquiring and intercepting bomber aircraft was “the lack of definite, continuing information of the hostile force.”³⁹ He argued pursuit intercept could be accomplished once the bombers’ altitude, airspeed, heading, and distance were known.”⁴⁰ Additionally, the defending pursuit planes could intercept the incoming bombers before reaching their targets if the pursuit aircraft received timely information and the interception area was deep enough to allow for the requisite time factors.”⁴¹ This allowed the fuel limited pursuit aircraft to be directed to the correct point in space for a successful intercept of enemy aircraft prior to their reaching the target.”⁴² Chennault realized he needed these

networks to allow his fighters to remain on the ground until the very last minute. All that was needed was an air raid warning system.⁴³

As soon as he arrived in China in 1937, Chennault pushed the Chinese hard for this system. He established this warning net upon his theories developed at the Air Corps Tactical School. He changed it from just a warning system to an intelligence network allowing him to get the right planes at the right place at the right time. Initially he netted only telephones together to avoid jamming by the Japanese.⁴⁴ Later, he added telegraphs and radios to link the people of China with his operations center. Information passed from spotter to spotter to warn of enemy aircraft movement. Chinese from all over the country would make initial reports on heavy engine noise to follow up reporting on specific data such as the number of planes or number of engines.⁴⁵ Chennault used the data to paint a picture of enemy attacks. The friendly fighters knew the numbers, type, altitude, and headings of the enemy by the time all the information arrived at the center. As a result the American Volunteer Group successfully intercepted and defeated the Japanese.⁴⁶ In Chennault's own words,

*The Chinese net combined with Chinese intercepts of Japanese coded radio messages later enabled me to operate my tiny air forces against tremendous odds. I always knew where the enemy was going to strike in time to concentrate my forces against his major blows.*⁴⁷

The first nets established in eastern China produced some significant additional advantages. Again, in Chennault's own words,

*The Chinese air-raid warning system was a vast spider net of people, radios, telephones, and telegraph lines that covered all of Free China accessible to enemy aircraft. In addition to continuous intelligence of enemy attacks, the net served to locate and guide lost friendly planes, direct aid to friendly pilots who had crashed or bailed out, and helped guide our technical intelligence experts to wrecks of crashed enemy aircraft.*⁴⁸

First, it saved lives. The early warning information alerted the native Chinese people of an upcoming raid. As a result, they were given enough time to leave the danger of open areas and seek shelter.⁴⁹ Chennault's system thus saved a large number of lives and further endeared him to the hearts of the Chinese.

Second, it offered the opportunity to find lost aircraft. The terrain of China did not provide many positive landmarks for navigation and weather was unpredictable. Since the net and all aircraft were on the same frequency, a lost pilot could call a control station. That station called the net headquarters and normally had information on the location of the aircraft. Lt Col (Ret) Jasper J. Harrington relates an interesting story to

demonstrate how the net aided temporarily disoriented aircraft. Lt Col Harrington, then serving as a P-40 crew chief with the American Volunteer Group, watched the tracking map one day with a pilot from his squadron. They could tell it was a friendly aircraft from its path. The trackers continued monitoring it and realized the aircraft missed the correct river turn to fly back to his origination base. The pilot with Lt Col Harrington radioed the aircraft and informed him of the wrong turn. The system thus prevented the aircraft from proceeding into a known enemy area where the airborne Flying Tiger would have received an unwanted "warm welcome" from the Japanese.⁵⁰

The third additional advantage was as a communications and intelligence net which provided not only information on enemy aircraft, but also could provide aid to downed friendly pilots and located downed enemy pilots.⁵¹ Again, a personal recollection by Lt Col Harrington helps demonstrate a practical application of the warning net. He would go into a cave and watch the Chinese put flags on large maps. These flags represented aircraft and indicated the direction of each one. Each net tied together by telephone and had grids identified by a specific number. The plotters and airborne pilots all used this common grid and map system and could easily direct each other to a specific location quickly and easily to affect any operation necessary. As a result, Lt Col Harrington helped recover more than one pilot and his P-40 that landed short of its intended destination.⁵²

This system became an interlocking and overlapping network. It created redundancy so that information was received through multiple sources as it progressed up channel. Ultimately, this redundancy protected against single point failures. The net was tied to American Volunteer Group communications and radio stations connecting Chennault, the pilots in the air, and the pilots on alert. The actual posting of this information at airfields and villages used the one, two, and three ball system. One ball indicated the enemy was one hour away; two balls meant the enemy was 30 minutes away; and three balls showed the enemy almost overhead or bombs within ten minutes.⁵³

The enduring significance and success of the warning net created and established by Chennault is demonstrated through intelligence assessments and documents produced during the remainder of the war. In a 3 July 1943 memorandum on "Enemy Reaction to Heavy USAAF Attacks on Vital Targets in Japan," the intelligence officer states

*Strong enemy air attacks against these [friendly] bases might be attempted, but with a splendid air warning net already established it is felt that such attacks in the future, as in the past, would prove too costly for the enemy to persist in same or achieve anything more than sporadic and infrequent success.*⁵⁴

A further testament to Chennault's net is contained in a 28 January 1944 memorandum on "Defensibility and Vulnerability of Chengtu Bases." This intelligence officer writes "...that the Chengtu warning net system has been tried and that upwards of two hours' warning would be received prior to the arrival of Japanese planes at this base."⁵⁵ Both these officers' assessments clearly show the significance and staying power of Chennault's concept put into practice.

Field correspondence with Chennault reveals the desire to continually improve this successful system. General C. J. Chow, Director, Commission on Aeronautical Affairs wrote Chennault in August 1944. He discussed the condition of the nets in three of his areas and provided to Chennault the improvements being made. General Chow's words reflect the importance of these nets and his direct involvement in their success.

*We have instructed them to pay due attention to the efficiency of their work, to increase the number and accuracy of their plots. ...In order to increase the efficiency and accuracy of plots from now on, the ...Headquarters ...has been wired to make this best use of materials and manpower. [T]he Headquarters ...are held responsible for timely repair work. They have been so instructed by express orders.*⁵⁶

Also in August 1944, Colonel Y. T. Yeng, Commander of the Chinese Fifth Route Air Force wrote Chennault about improving the air defense net in his area. Colonel Yeng's letter identifies his assessment of potential enemy activity in the area and requests Chennault's assistance to rearrange assets. Colonel Yeng writes, "By my opinion, enemy air force in Burma is rather inactive. So if you could spare a part of the signal equipments [sic] in stations at Paoshan (about 10 sets) for the Kweichow area ..., it would relieve the present situation and advantage both of us as a whole."⁵⁷ Unfortunately for Colonel Yeng, General Chennault did not act on this recommendation based upon the larger picture viewed by Chennault. However, it illustrates the importance placed on the net for successful military operations by both the commanders.

The men in Chennault's command also provide insight to the criticality of the air defense system. Bob Liles spent two years in China in the 16th Fighter Squadron. He commanded the squadron during his second year. He offers this personal view of the air raid warning net.

*I am aware of only 2 instances when my unit failed to get enough warning to get off before the enemy arrived over our base. I believed the warning net to be excellent, especially considering the kind of communications equipment that was available. It took lead time, a lot of planning to put it in place, and a lot of good management to maintain it in readiness.*⁵⁸

Robert M. Smith, a radioman with the AVG and later Commander of the 159th Army Airways

Communication System Squadron in China offers his view of the warning net.

*The Chinese air-warning net was recognized as the best in the world until radar was introduced. ...Chennault believed with this continuous information, his commanders could launch their fighters into the air at the right time and place to intercept and defeat bombers before they arrived at their planned points of attack.*⁵⁹

Further correspondence between Smith and Chennault reveals Chennault's own thoughts on his net.

*I may write a book eventually and I certainly would like to include the story of our communications net, which was far superior to anything of its kind anywhere else in the world. ...I have always stated and felt that the network set up by the AVG had no superior anywhere in the world and that, as a matter of fact, there was no precedent for such a communications and air-ground control net in all of history. I have also believed that if I had been acquainted with the plan for landing Doolittle's B-25s in China, we could have put one station in East China with ground-to-air communications and a small homing beacon that would have enabled the majority of Doolittle's planes to land safely. There is a field in East China designed and constructed for this purpose but unfortunately I was not taken in on the secret and no communications for ground-to-air were established.*⁶⁰

What a tragedy that a system which worked so well against the enemy and for the forces under

Chennault's command lost an opportunity to work for Doolittle's raid.

In the end, however, this network became so effective that "Chinese headquarters are warned of raids while Japanese bombers are still warming up at their bases."⁶¹

CHAPTER IV

THE COMPREHENSIVE APPROACH

The second element of the Clausewitzian framework for genius focuses on the comprehensive approach. Clausewitz's strength of character characteristic may dominate an individual pursuing this approach. The military genius is the individual "whose views are stable and constant", "well thought-out and clear", and reflect a "firm decision, based on fundamental principles derived from reflection, [and are] relatively immune to changes of opinion." Further, he states "only those general principles and attitudes that result from clear and deep understanding can provide a comprehensive guide to action." Clausewitz then repeats the requirement of the "dominating principle to stick to one's first opinion and to refuse to change unless forced to do so by a clear conviction."⁶² Clausewitz's identification of the necessity for a comprehensive mind reveals the need for a total view of a situation. Additionally, this characteristic may be best demonstrated not only by the individual who conceives the ideas, but effectively transmits this information. Chennault's total and exhaustive study of pursuit aviation is dominated by his comprehensiveness and his ability to impart that knowledge.

Chennault viewed the theory and application of pursuit from virtually every direction. His writings and more importantly his teaching enabled the Flying Tigers of China to achieve success. He clearly understood the problems he faced and he forcefully carried his theories into battle.

Upon his arrival in 1937, Chennault accepted a three month mission from Madame Chiang Kai-shek to survey the Chinese Air Force. Chennault's personal interpreter and confidant, Colonel P. Y. Shu, remembers Chennault needed to look not only at the Air Force but at China as well.⁶³ He examined all aspects of the force finding significant internal problems. Chennault also discovered they could not fight because they lacked the proper training and equipment. Also, during these travels he spent considerable time studying and writing extensive notes on the weather, roads, railroad system, and navigable landmarks. Chennault also took movies of Japanese formations and filled his notebooks with comments on Japanese tactics.⁶⁴ These books would become invaluable later. Most importantly, from this comprehensive analysis

and investigation, Chennault built a personal foundation of support. He established relationships with the Chinese people irrespective of their status level; he determined sites for and started to build strategically located airfields; and he initiated his air raid warning system discussed previously.⁶⁵

Chennault faced serious training problems as he began preparing his American Volunteer Group for combat against the Japanese. Most significantly, the majority of the pilots had never flown the P-40 aircraft before their arrival, even though the P-40 was the AVG's mainstay. When they did begin operations, these pilots would work from extremely bare base airfields which were rough and muddy. Once airborne, these aviators had few if any maps, no homing devices, and unpredictable weather conditions. Certainly, these were not the optimum conditions to begin this fledgling service.⁶⁶

Fortunately, Chennault knew the P-40 and its capabilities. More importantly, he knew how to fight within them, how to maximize the P-40's strengths, and to avoid its weaknesses. He linked this knowledge with his observations and combat experiences with the Japanese Zero. Fundamentally, Chennault's study told him the Zero could outmaneuver fighters from the United States and Britain. However, the Zero could not dive with the P-40, a point made clear as Japanese pilots ripped the wings off their aircraft in dives similar to those in the P-40.⁶⁷

Chennault started what he termed "a kindergarten for teaching bomber pilots how to fly fighters." He initiated this process because virtually none of the pilots met the standards he desired and over half had never flown fighters at all. Most of the pilots, however, had extremely high opinions of themselves and thus they were not real sure what "a beat up old Army Captain who had been buried in China for years" could teach them. These pilots did not yet realize the extent of Chennault's knowledge and planning. They did not know Chennault, "...had been working on my plans to whip the Japanese in the air for four years, and I was determined that, when the American Volunteer Group went into battle, it would be using tactics based on that bitter experience."⁶⁸

In China, Chennault developed a training program which produced significant results under his direct tutelage. Every American Volunteer Group (AVG) pilot was required to undergo this training. In addition to his training in pursuit tactics, Chennault covered such subjects as the geography of China, the history of China's war with Japan, the intricacies of the air raid system in China, and the Japanese pilot and aircraft.

Every pilot had to learn these subjects to Chennault's satisfaction because Chennault, and only Chennault, determined when they would be ready for battle.⁶⁹

Chennault's program consisted of 72 hours of classroom training and 60 hours of flying training. He taught them everything he knew and had experienced. He had chronicled his exhaustive studies of the previous four years of combat in his notebooks and now he had the right audience at the right time to benefit from this knowledge. When the AVG pilots finished his training, Chennault felt "the American pilots learned more about Japanese tactics than any single Japanese pilot ever knew."⁷⁰

Every training day for the AVG pilots began at 6 or 7 am with a lecture by Chennault or a special guest. Chennault drew heavily upon his extensive experiences as an advisor in China since 1937 and on his rumored combat experience against the Japanese.⁷¹ He further sought the experiences of speakers on topics ranging from engine specialists to Royal Air Force pilots.⁷² After the opening speaker, he would lecture on the weakness of Japanese fighter aircraft describing vulnerable areas and best angles of attack as well as on Japanese tactics and how to counter them. Chennault thoroughly studied Japanese flight manuals recovered by the Chinese Air Force and made detailed drawings of captured aircraft for these instructional sessions.⁷³ Through observation, Chennault understood the Japanese fought under rigid flight discipline causing them to repeat their tactics.⁷⁴ His exhaustive study concluded the Japanese could be defeated by breaking their formations and conducting the fight according to AVG and not Japanese strengths.⁷⁵

Chennault presented the information in great detail. His drawings and information on construction, performance, and armament of Japanese aircraft probably exceeded that available in the States. Every AVG pilot received copies of drawings of the Japanese Zero and they had to learn the locations of all the critical vital areas and reproduce them from memory. Chennault's philosophy was clear, they had to know these items without thinking because in combat "it is training and reflexes that count."⁷⁶

Chennault approached every lecture like a football coach. His animated hands and diagrams on the board during his chalk talks led his AVG pilots through their education. He based these talks on four principles to stay within the P-40's strengths which he mated to the Japanese deficiencies. The pilots needed to *dive* on the enemy from above; *squirt* through the enemy with a burst of machine gun fire on the target; *pass* through the enemy to a lower altitude and get away from their turning capabilities; and *run* back into the fight from another direction with the sun at your back and above the enemy's altitude.⁷⁷

Chennault structured a framework under basic, yet complete rules. Fundamentally, his message to the AVG was to be flexible, be a team, and to know your strongest point and use it.⁷⁸ He reminded them to maintain their two ship formation teamwork, to use diving tactics to take advantage of their aircraft's performance, and of the criticality of accurate marksmanship.⁷⁹ He constantly coached the AVG to stay together, hit and run, withdraw in a timely manner, concentrate their forces, and know themselves. Above all he cautioned, "Don't do anything stupid just to be brave."⁸⁰ These instructions were based upon his knowledge that pilots had to know how to fight and live until another day because he saw little or no real chance of replacements for his pilots or their aircraft.⁸¹

Chennault selected the two ship element as his fighting unit. He arrived at this unit after an exhaustive study of World War I and then current tactics. His studies of World War I centered on Oswald von Boelke and Baron Manfred von Richtofen, better known as the Red Baron. These World War I aviators changed from single ship pursuit tactics to two ship attacks, and the Red Baron's successes are legendary. In contrast, the United States Army and Navy preferred a three ship fighting unit. Chennault, continuing to study pursuit and incorporating his own experiences with his aerobatic team, settled on his version of the two ship tactic. He felt it provided significantly greater maneuverability and was much more fluid since the wingman could change positions easily without concern for another wingman. Also, the leader and wingman each possessed greater lookout for the enemy because of less concern about additional members in the flight.⁸²

After the classroom instruction, the pilots would take their lessons to the sky under the watchful eye of Chennault. He would stand in the control tower with binoculars and meticulously dictate notes critiquing their performance. Everyone would return to the classroom and painstakingly go over every detail.⁸³ Chennault often repeated he "refused to throw a pilot into the fray until I was personally satisfied that he was properly trained."⁸⁴ Later, he even reviewed the details of successful combat engagements. After the first victory for the Chinese after 4 1/2 years of Japanese bombing, Chennault said to the squadron leader, "Not a bad job, but it should have been better. Now let's go over what happened and make sure we get them all next time." He seized every opportunity to avoid overconfidence in his pilots and improve their lethality by looking for the smallest corrections.⁸⁵ His efforts resulted in virtually the only early successes against the Japanese. The AVG enjoyed a 15 to 1 kill ratio, as compared to the Royal Air Force who were relatively even, against the Japanese.⁸⁶

Chennault's training program did not stop once combat began. In fact four months into combat operations there were still 18 pilots not certified because they were not yet ready.⁸⁷ Even later in 1942 after he began receiving trained Army Air Corps pilots, Chennault dealt with these inadequately trained replacements. He commented, "They were ample proof that combat pilots can't be turned out like quick-lunch hamburgers, no matter how urgent the emergency."⁸⁸ Chennault even established a Chinese-American Composite Wing to get partially trained Chinese pilots who earned their wings in the States ready for combat.⁸⁹ They all underwent training in China to make up for their lack of gunnery, formation, and navigation experience. Chennault knew combat was difficult enough for experienced pilots. The training was essentially their final exam before going against the Japanese.

Chennault's view of his training program is telling.

All my life I have been a teacher, ranging from the one-room schools of rural Louisiana to director of one of the largest Air Corps flying schools, but I believe that the best teaching of my career was done in that teakwood shack at Toungoo, where the assortment of American volunteers turned into the world-famous Flying Tigers, whose aerial combat record has never been equaled by a group of comparable size.⁹⁰

Again, the recall of these times by the men in Chennault's command offers great insight to the training and teachings of their commander. General Bruce Holloway, former commander of the Strategic Air Command, and Commander of the 23rd Fighter Group during World War II, remembers Chennault's points on fighting the Japanese.

General Chennault was indeed an outstanding and successful tactician. He was also an outstanding teacher, and a visionary with a wealth of common sense. ...[We were to] cover each other, and don't try to hang in there and turn with them. It was about that simple. Use your diving speed advantage, and if you were grossly outnumbered and they had you to where you could not get the initiative, just get down as low as you could and keep going. ...Together with an uncanny ability to assess what the enemy would do, he knew when, where and how to strike for maximum affect; and what counter-action the Japanese would take. His battle tactics are legend, and many airmen who served in China are alive today by following his wise counsel on air-fighting and battle discipline.⁹¹

General Holloway continues on the subject of taking advantage of the Japanese rigidity discussed by Chennault.

They [the Japanese] planned things out to minute detail in respect to raids, and who would be in what position, what time they would get to the target, and what time they would leave the target, and they adhered to it. Then also, if they made an attack on one of your bases, at the appointed hour to leave and return to base, they left. ...so if you still had any gas left after the fight around the base area, you would know where they came from and you had the ground reporting net that would tell you which way they were going -- just follow them out and you would usually get one or two you could pick off out there someplace.⁹²

David "Tex" Hill, original American Volunteer Group member, Squadron leader of #2 Squadron, the first Commander of the 75th Fighter Squadron, and Commander of the 23d Fighter Group speaks of Chennault.

...[Chennault] gave us our tactical lectures. Our training [included] classroom work and orientation in the P-40. In his classroom work he taught us the tactics that we should use against the Japanese. He had studied the Japanese aircraft since 1937.... He saw the strong characteristics of them, the weaknesses and when we got over there he was able to show us how to use the strong points of the P-40 against the weak points of the Japanese aircraft. [T]he main thing we had was speed and firepower and a very rugged airplane where the Japanese had a very light wing loading. They could turn inside of us, and sometimes they could ...get above us. If you have speed, then you can choose the time you want to fight and if you don't want to fight, you can go home. The other thing he developed was to ...fight in pairs. It gave you a lot of flexibility to have a basic element of two aircraft, instead of the old [three ship] unwieldy a-b-c formation which we had when I left the fleet.

...[W]ith [regard to] the two ship element, one P-40 could not shoot down on Jap ...engaged just one on one. ...[H]e would be watch you close in ...and right when you came within range, he'd wrap it up in front of you and you couldn't pull enough deflection to get him. With a two ship element, the wingman could pull out wide and that would give him a shallow angle and he could get the [Japanese].

The tactics that he taught us stood us in good stead and we only lost four pilots in aerial combat. And that was a result of these tactics. We never tried to turn with them, we'd hit them and dive out, and come back up and hope to find another target. That covers our tactics and the way we used the airplane.⁹³

Bob Liles, former commander of the 16th Fighter Squadron, remembers 50 years later the worth of Chennault's teachings on tactics and the Japanese.

Gen. C used to meet with groups of new pilots coming to China to give them orientation briefings and talks on tactics. My new pilots were certainly impressed by this. General Chennault's tactics with 2 ship elements hitting the enemy from above, and breaking away and repeating the process as often as the situation permitted, allowed us to fight against superior odds without heavy losses. We were outnumbered most of the time-frequently by 3 to 6 to one odds.

Since [the Japanese] got away unscathed [from the previous day's attack], Gen. C believed that they would hit our base again at the same time the next day. He directed that we put extra planes at Yunnan Yi, and that we patrol for warning with one half of our planes, and at the time of the previous attack have all of our planes in the air. We increased our plane count to 19, followed his instructions, and at exactly the same hour the Japs arrived over Yunnan Yi with 20 planes. These were the best odds we ever had, and we shot most of them down.⁹⁴

Others also remember their time 50 years ago.

My main impression of Chennault was his dedication to hitting the enemy as much as possible. That was the thrust of all his planning. Almost all of our group respected him and felt we could talk to him at any time. I think his school teaching experience helped him to contend with us. Dick Rossi, American Volunteer Group, #1 and #3 Squadron⁹⁵

Chennault's tactics were common sense. Always have top cover when possible. Line abreast flts of two when engaging zeros. Don't try to turn with them. Head on passes. Hit & run then come back. Element of surprise. Above all don't get lost and save enough fuel to get home. Joe Summey, 75th Fighter Squadron⁹⁶

He emphasized the two man element for mutual protection in any fight with zeros we would surely get into. He also was quite adamant in saying no matter how good you were, not to try to turn or climb with the zero in a P-40. John "Rosie" Rosenbaum, 75th Fighter Squadron⁹⁷

[Chennault] took on personnel who were right out of a cross section of the military, and made us unbeatable tigers. We were unbeatable because that's what we wanted to be, more than we wanted anything else. The only fears we had were not of the Japs, but of falling short of our calling as tiger sharks. David Rust, 75th Fighter Squadron⁹⁸

As far as I was concerned, he was a giant of a man, very knowledgeable fighter tactics. We had the P-40 in those days. He told the pilots and all the men P-40 was very heavy-to use its strong points-was get altitude and make one pass at the zeros from the sun at his back. If they stuck around to dogfight they were doomed. At one time we had only fifty P-40s at three airfields and by painting the nose cones different colors on different missions the Japs mentioned at one time they figured we had less than 500 planes. Ben Benetis, 75th Fighter Squadron⁹⁹

If the pilots went out single ship, the zero had the advantage. [But] if they followed Chennault's instructions and stayed together, they'd get the zeroes. Because the zero was made to dish it out but not take it. Earl Nash, armorer, 75th Fighter Squadron¹⁰⁰

Chennault's tactics were most effective and if you followed them and not your instincts, instilled in stateside training to engage in turning fights, you had an excellent chance of not only surviving in air combat but of destroying any Japs you were fortunate enough to meet in the air. Don Lopez, Operations Officer, 75th Fighter Squadron¹⁰¹

Chennault knew the characteristics & capabilities, and the attitudes, skills & limitations of Japanese pilots as no other man even approached. He studied them for 4 1/2 years prior to WW II. He even flew a P-35 Hawke, gift of Madame CKS, & closely observed actual engagements. There are stories but never acknowledged by Chennault that he personally shot down over 40 Jap a/c. Charlie Cook, 74th Fighter Squadron¹⁰²

The results of this training paid off in virtually every aerial engagement. After a particularly difficult campaign in Rangoon where the AVG enjoyed significant success, Winston Churchill wrote the Governor of Burma. The Prime Minister stated, "The victories of these Americans over the rice paddies of Burma are comparable in character if not in scope with those won by the R. A. F. over the hop fields of Kent in the Battle of Britain." A British Air Vice Marshall further "noted that while the ratio of British to German

planes in the Battle of Britain had been 1 to 4, the ratio of Anglo-American fighters to Japanese planes over Rangoon was 1 to from 4 to 14.”¹⁰³ High and well deserved praise to Chennault, his methods, and his men.

CHAPTER V

THE CALM HEAD

The third element of Clausewitz's framework for genius focuses on the calm head. The individual who possesses this trait must certainly demonstrate Clausewitz's ideas of courage, presence of mind, strength of mind, and self control. Courage is required because, as Clausewitz points out, "War is in the realm of danger; therefore courage is the soldier's first requirement." This courage is further divided into "courage in the face of personal danger and courage to accept responsibility." Clausewitz continues to delve into the characteristic of courage by subdividing courage in the face of personal danger into two parts. The first, indifference, could be just in the person's makeup or their thinking little of the value of life. This Clausewitz deems a "permanent condition", dependable and unfailing. The second, a feeling or emotion, results from "ambition, patriotism, or enthusiasm of any kind." This type of courage has greater potential. Clausewitz then ties them together. "There is more reliability in the first kind, more boldness in the second. The first leaves the mind calmer; the second tends to stimulate, but it can also blind. The highest kind of courage is a compound of both." The combination of both certainly exists to maintain the calmness in control.¹⁰⁴

The second characteristic of the calm mind, presence of mind, allows the individual to handle unexpected events calmly and correctly. Clausewitz's discussion shows it does not matter how this presence emerges, the critical element is that "resourcefulness in sudden danger calls ...for steady nerve."¹⁰⁵

The next characteristic is actually a combination of strength of mind and self control. Clausewitz defines the former as "the ability to keep ones head at times of exceptional stress and violent emotion." The latter is defined as "the gift of keeping calm even under the greatest stress." These ideas essentially describe the ability to maintain balance regardless of ones emotions.¹⁰⁶ These characteristics of the calm head are probably those most closely associated with a warrior and make for the easiest direct comparisons with Chennault.

Chennault's actions throughout his life, from his youth to combat operations, definitely displayed the qualities of an individual with a calm head. As a boy he "found he could control fear more effectively than most."¹⁰⁷ As he grew he always saw himself as a fighter understanding the fighting man. He even titled his

memoirs, *Way of a Fighter*.¹⁰⁸ A Chennault biographer describes him during his pursuit career as possessing the "right stuff", as defined in a pursuit course textbook as "an eagerness for combat" and "the proper combination of reckless disregard for danger and prudence in aerial combat." He also displayed "a competitive nature devoid of fear."¹⁰⁹ Ultimately, he had a reputation as a gambler taking risks and attacking. But he only gambled with the best hand.¹¹⁰ Moreover, Chennault proved his pursuit theories in the most difficult and demanding classroom arena. He would take his ideas into the cockpit and fight man against man in aerial combat training.¹¹¹ This is the basis of the man who went to China in 1937.

When the men of the AVG first met Chennault on the docks of Rangoon, they knew this was a man of courage. He established himself immediately through

*...a natural magnetism and charisma peculiarly suited to these unique circumstances, for he exuded a rough, masculine courage and strength together with other virtues that young men admire. With black eyes flashing in his weathered face, he left no doubt as to who would be in charge. A fighter pilot, he sometimes told them, needs to have complete belief in himself and in his ability to handle anything that walks, swims, flies, or wears skirts. With this kind of man, the men of the AVG could identify, and from the time they first met him he 'had them all in his pocket'.*¹¹²

A significant test of Chennault's calm mind took place in his preparation for the Trident Conference in the spring of 1943. During this conference in Washington, DC, President Roosevelt and Prime Minister Churchill received briefings on the war in the Pacific theater. With no prior notice, Chennault was alerted by General Stilwell they were to leave immediately to brief these leaders. In keeping with his long standing relationship, Chennault first visited with General Chiang Kai-shek. Then, "On leaving the Generalissimo in Chungking, I had no detailed written plan for China air strategy. Perhaps I had better have one by the time we landed in Washington..."¹¹³ Chennault proceeded to write the plan on the plane ride to the States. He wrote in longhand, using his briefcase across his knees as a desk. Once in Washington, it was quickly typed and he presented it to the President and the Prime Minister at their conference.

The conference became a verbal battleground between Stilwell and Chennault. Chennault continually disagreed with his superior over how to conduct the war in Asia. In the end, Chennault calmly stood up to Stilwell, pressed his points under these difficult circumstances, and won. Both Roosevelt and Churchill selected Chennault's plan over their military advisors objections. Later, Chennault rebriefed the President in private and was told to write directly to Roosevelt to keep him informed.¹¹⁴

Perhaps Chennault demonstrated his greatest calmness through his trust in his commanders. He knew unexpected events would constantly occur in their combat environment and he knew he had trained his men well. Fortunately, he gave them the freedom to command to their ability, without excessive restrictions, and to use their own resourcefulness.¹¹⁵ According to Lt Col Harrington, "Chennault had faith in the people he put into the jobs. He didn't make decisions for them."¹¹⁶ Obviously, the ability to do this takes more than just faith.

The greatest testament to his calm mind is Chennault's combat flying and operations. Shortly after his arrival in China he "...began very quickly to fight the Japanese as a combat pilot rather than merely as an advisor."¹¹⁷ Chennault comments in his memoirs,

*It was in the Hawk Special that I got my first taste of Jap flak and fighter tactics, and that I learned some of the lessons that later saved many an American pilot's life over China. (PP:57) "The Hawk Special acquired some bullet holes much too close for comfort as I learned very, very early in the game that trying to turn with the Jap fighters was non-habit forming."*¹¹⁸

Not only did he survive, but gathered valuable information under the most difficult of situations.

In December 1942, Chennault's men, without his knowledge, submitted him for the Congressional Medal of Honor. Signed by almost 300 personnel, they cited his long list of actions. Although reluctantly forwarded through channels by Generals Bissel and Stilwell, Chennault never received the Medal of Honor sought by his men. The words reflect his significant accomplishments. It stated, in part,

...it is recommended that Brigadier General Claire L. Chennault, United States Army be awarded the Congressional Medal of Honor. ...He mobilized, trained, and led a Chinese Air Corps and observed Japanese fighting tactics in the air. He flew over enemy actions in transports for observation and from the ground has observed enemy attacks with field glasses while Japanese bombs burst all around. His utter disregard of personal danger under heavy fire and aerial bombardment, and his calm judgment in each crisis has inspired his men, both Chinese and American. ...By his own intrepidity and valor he has learned Japanese tactics in such a manner that he is able to defend China with a force almost infinitesimal in comparison with the enemy. ...During the six months of combat he saw the [American Volunteer Group] destroy over three hundred Japanese aircraft while losing eight. ...He has subjected himself to over one hundred bombing raids in order to study the little known enemy tactics and to personally direct his Group when he was ordered by doctors that his flying leadership would be fatal to him. All of this action in China was for the purpose of learning tactics that would benefit his country; all of this after having been warned by medical men that return to the climate of China would probably bring about his complete loss of health. ...His years of bravery in China have now borne the fruit of victory for his country. ...For his inspiring leadership, for his intrepidity above and beyond the call of duty, for his conspicuous gallantry, extraordinary heroism and valor under countless bombings to study Japanese aerial tactics both from the air and in unprotected positions on the ground, showing personal bravery so clearly as to distinguish him far above his comrades, for the honor he has brought America in a land where foreigners have little influence, for the fact that he has by his own character and genius provided a prepared battle ground for the United States, it is recommended that this gallant soldier be awarded the highest decoration by his country.¹¹⁹

Excerpts from the citations for Chennault's Air Medal and Distinguished Flying Cross further attest to his calmness under fire. Both are signed by Major General George Stratemyer, Commander, Army Air Forces, India Burma Sector.

7 September 1943. ...the Distinguished Flying Cross is hereby awarded to Major General Claire L. Chennault, ...for extraordinary achievement in aerial flight. During the period 21 April 1942 to 31 August 1943 General Chennault flew many thousands of miles over enemy territory in China and Burma. ...he has personally directed attacks against numerically superior enemy forces, deploying his meager personnel and materiel with tactical brilliance to obtain maximum efficiency and results. The continued effective tactics as developed by General Chennault and the tenacity of purpose exhibited in his aerial activities in the China-Burma-India Theater constitute acts of extraordinary achievement and upholds the finest traditions of the Army Air Forces.¹²⁰

7 February 1944. ...the Air Medal is hereby awarded to Major General Claire L. Chennault, ...for meritorious achievement in aerial flight by participating, as command pilot of an unarmed C-47 transport airplane, in numerous reconnaissance missions over enemy-held territory between 1 September 1943 and 31 January 1944 during which exposure to enemy fire was probable and expected. ...General Chennault's disregard for personal danger in the performance of these missions displays a devotion to duty and a degree of efficiency above and beyond that normally expected and upholds the finest traditions of the Army Air Forces of the United States.¹²¹

Finally, Chennault's men remember their commander 50 years later.

The old man was always a real cool cat. I never saw a guy with all the burdens he had over there, and ...at night go to bed and sleep all night long. He had the ability to do that where most of us would be fretting about the problems that we had, but he was able to turn it off and rest. ... I said I don't know how in the world you do that. Chennault answered, 'I have to.' He was very remarkable that way. ...I would come up from Kweilin or Hengyang where I was most of the war in the latter days and always stay with [Chennault]. I asked him one day about having so many problems with General Bissell and Stilwell and the hump tonnage. They were shipping a lot of stuff that was not really high priority ...and we were short so many things we needed to fight a war and they just seemed to try and block everything that he was trying to do. I said, 'General I don't see how you can handle all of this with all the problems you've got right here and then these guys on top of that give you additional problems.' He said, 'Tex, I know what my job is - I do the best I can every day. If the other guy doesn't do his job, it makes it harder on me, but I know what my job is'. So he just dismisses those things ...and he doesn't get all upset about it, ...in other words, he just doesn't lose the bubble. Tex Hill, AVG Squadron Leader, 75th Fighter Squadron Commander and 23d Fighter Group Commander¹²²

General C. spawned leadership in the tactical units by not over-managing from the top. He spelled out the mission clearly without specifying minor details, and encouraged commanders to use initiative in carrying out their mission. This quality was much appreciated by commanders. Bob Liles, 16th Fighter Squadron Commander¹²³

A story I heard from Tex about the Gen. As I remember, Tex lost three planes in a flt of 4. He told the Gen that they had trouble when always outnumbered in the air. He said, Tex if you can't handle them in the air, shoot them up on the ground. Tex said Chennault had a simple solution to every problem. Joe Summey, 75th Fighter Squadron¹²⁴

Nothing phased Chennault. If someone had put a gun in his face, I don't think he'd flinch. Jasper Harrington, crew chief, American Volunteer Group¹²⁵

These words certainly describe a man possessing courage, presence of mind, and a combination of strength of mind and self control. The aspects of the genius are thus complete.

CHAPTER VI

THE BIG QUESTION

After exploring the deeds which make Chennault a military genius, one big question arises - why was Chennault ignored? Specifically, why were his ideas ignored at the Air Corps Tactical School which became dominated by the "accepted" doctrine of daylight strategic bombing? This question requires investigation since Chennault's theories proved successful during the actual combat conditions of World War II. A look at both the environment Chennault operated in and Chennault personally is necessary.

Chennault was a student in the ACTS class of 1930 - 1931 and remained on the faculty as the Chief of the Pursuit Section until 1936.¹²⁶ He was part of a cadre of "officers in responsible posts at the school ...[who] were men of discerning minds and possessed a keen curiosity regarding the impact of air power on war. ...[T]hey added the final touches to the slowly emerging concepts of air warfare."¹²⁷

Although pursuit emerged from World War I in a prominent role for the air forces, it entered its period of decline after 1932. This decline was caused primarily by the appearance of the B-9, B-10, and B-12 bombers in 1933 and 1934. These new generation, high-speed bombers outpaced early pursuit designs. However, even as late as the end of 1933 ACTS "announced that it would continue to recommend the development of a fighter capable of accompanying bombers and furnishing protection from hostile pursuit."¹²⁸ More significantly, in 1933 the commandant of the ACTS, Lt Col John Curry, wrote further about the relationship of improvements to the bombers and the need for improvements in pursuit.

...the more important our targets are the more determined will be their defense and we can expect to have our formations opposed by interceptor pursuit. This opposition will be encountered beyond the radius of our present single-engine pursuit unless we are willing to confine our operations to that limited radius. It is probably impossible to determine accurately how much pursuit opposition will be encountered, and it most difficult to determine from the effort so far expended, how much of such opposition a defensive formation can withstand. But it is unthinkable to confine our aerial operations to the limited range of present pursuit aviation. Furthermore, it is obvious that we must return a large proportion of our formation from any particular mission, so that it will be available for further operations. The questions to be determined are: is protection of our formation necessary, and (if so) what should be the proportion between a given number of planes available, how can we deliver the greatest amount of high explosives?¹²⁹

Lt Col Curry's questions push for a decision of the mission of pursuit. Interestingly, he was not concerned at all about design. He thought the decision on mission would lead to determining the most effective design. Obviously, pursuit aviation was firmly in the thinking of the ACTS. However, even the commandant's views did not stem the decline of pursuit thinking and instruction.

Moreover, several exercises held in 1933 contributed significantly to continuing the decline in pursuit. Pacific coast maneuvers pitted the P-26 pursuit aircraft, the "earliest and already outmoded standard all metal monoplane fighter", against the B-12, the "most modern bomber."¹³⁰ In a similar test in Louisiana, Lt Col Harrington, then an aircraft crew chief, witnessed the P-26 against the B-10. Even this earlier bomber had speed and rate of climb advantage and the P-26 could not catch the bomber.¹³¹ The test results implied pursuit was no match for bombers and the bomber advocates used them as justification to push pursuit as solely a defensive weapon. Also in 1933, during air exercises held at Wright Field, an officiating air umpire declared, "due to increased speeds and limitless space, it is impossible for fighters to intercept bombers and therefore it is inconsistent with the employment of air force to develop fighters."¹³²

The arrival of the B-17 in 1935 led to an even greater decline in pursuit thinking. This bomber, properly located, offered the ability to hit an enemy's air forces, interior, and industrial targets. This technological advance created a significant dilemma since "[n]o pursuit existed that could keep pace with the bombers in the execution of such missions; as far as most [ACTS] instructors were concerned, because of engineering reasons, none could be produced."¹³³ But why did these instructors think advances in pursuit aircraft could not follow bomber advances? Unfortunately, no clear answer emerges to this question. Regardless, pursuit development lagged because of a shortage of funds for development; the belief that longer range pursuit aircraft meant a decrease in its fighting characteristics; and the belief, by this time, that bombers should be given priority. Therefore, "pursuit instructors following Chennault tended to define the role of pursuit in terms of capabilities of existing aircraft."¹³⁴

General George C. Kenney, in an introduction to a book on Chennault, provides an observation clearly defining the environment of the time.

*In time of war the rebel against accepted doctrine who wins is decorated, promoted, and hailed as a great military captain, but in time of peace the nonconformist is looked upon as a troublemaker. He is seldom marked for promotion to higher rank and is generally retired or induced to resign.*¹³⁵

Chennault's personality and personal traits may also have led to his difficulties in advocating his pursuit theory, particularly in the ACTS environment. He succinctly describes himself.

*I early developed very fast mental reactions and muscular coordination. It required very little time for me to estimate a situation, make a plan, and go into action. I was always impatient with anyone who required more time to do these things. This trait produced unfortunate results in later years because I was seldom able to explain my plans in detail to my superiors. Usually, it never occurred to me to explain my plans, and I suffered a defensive complex if required to do so. My best results were attained when given complete freedom to act upon my own initiative.*¹³⁶

Additionally, he occasionally experienced apparent difficulties articulating his position, especially if it required a degree of tact. According to a biographer,

*When he had to please or convince others, he seemed not to have basic interpersonal skills, not to understand the appropriate limits of opposition, not to have sufficient depth to concede that life had tones of gray. ...[W]hen working with words, he invariably relied on bluntness rather than finesse. He could not verbalize abstractions and convey them to others. At times he seethed with the frustration of perceptions that he could not articulate satisfactorily. ...[T]his curse of personal conviction unaccompanied by persuasive skills, plagued him throughout his career.*¹³⁷

However, even though outnumbered by the bomber advocates, "Chennault alone was willing to put his future on the line and take the lead for the minority in an internal power struggle."¹³⁸ This willingness did not prevent ACTS officers from dismissing Chennault's ideas for many reasons. At times, his abrasive arguments led to misinterpretations by some and others just did not like his personality. Still others thought this pursuit pilot was naturally biased toward his fighters.¹³⁹ While these may not be considered totally logical reasons, and certainly not new reasons, they are somewhat understandable within the context of the environment of the time.

Reflections of those who knew him well also shed light on Chennault's personality. General Holloway offers the following in his oral history.

*...[Chennault] couldn't get along with anybody above him unless they absolutely agreed with him. He didn't know the meaning of the word compromise. ...[H]e did not get up there to the very top, which he would have, without any doubt, if he had just a little bit more tact and the ability to get along whether he agreed or not. In other words, compromise a few points to make a little gain rather than a big loss. He didn't understand it, didn't do it; that's why he got fired in the first place and shipped off to China where nobody would have ever heard of him.*¹⁴⁰

Chennault's men remember 50 years later.

*Most of the people over Gen Chennault didn't like him and he didn't like them. I'm sure he resented the AAC when he had to give the AVG up and come under their authority. Chuck Glanville, 75th Fighter Squadron*¹⁴¹

...[Billy] Mitchell's followers, unlike himself, tended more and more toward unescorted pinpoint bombing by daylight. This got to be the politically correct party line among US airmen, but Chennault wasn't buying it. I think that was why he got eased out in '33, or whenever it was. And Clayton Bissell seems to have taken on a personal vendetta against Chennault. David Rust, 75th Fighter Squadron¹⁴²

He apparently had little regard for normal army procedure. I think that he was totally concerned with success in China and ignored what he believed to be trivia. Chris "Sully" Barrett, 75th Fighter Squadron¹⁴³

In small contrast, Chennault talks of his dealings with the Chinese.

My policy in dealing with the Chinese eventually boiled down to rolling with their punches and yielding on many minor, unimportant matters and always facing them down with a determined, stubborn stand on every major issue. It took a tremendous amount of time and energy, which many Americans were unwilling to expend on the Chinese, but in the end I felt it was worth it because it worked and enabled me to accomplish the things I wanted to do.¹⁴⁴

One wonders what would have happened if he had been able to find some points to yield on during the ACTS years? What would have happened if Chennault's theories had prevailed? Certainly, the possibilities for a different war in Europe during the early days of World War II are staggering.

CHAPTER VII

CONCLUSION

A military genius as described by Clausewitz is rare. Nevertheless, Clausewitz's framework for the mind of the military genius comfortably surrounds Claire Lee Chennault. He demonstrated a "sense of unity and a power of judgment raised to a marvelous pitch of vision."¹⁴⁵ Further, he held to this vision and the course necessary to ensure its fulfillment. Chennault's inquiring mind developed airpower theories recognizing shortfalls in the mainstream thinking for bomber doctrine and pursuit aviation. Further, his development of an intelligence gathering network to attain air superiority clearly looked past the conventional wisdom of the day. Additionally, his comprehensive mind and approach ensured his pilots were ready for success in combat. Most importantly, his courage and the ability to maintain a calm head regardless of circumstances provided the capstone of leadership by example so necessary combat. Chennault certainly exhibited an outstanding temperament and intellect which "reveal themselves in exceptional achievements" such that "their possessor is called a genius."¹⁴⁶ Chennault ultimately meets Clausewitz's test whereby,

*Appropriate talent is needed at all levels if distinguished service is to be performed. But history and posterity reserve the name of "genius" for those who have excelled in the highest positions-as commanders-in-chief-since here the demands for intellectual and moral powers are vastly greater.*¹⁴⁷

Finally, a British Vice Marshall on an inspection visit to Chennault succinctly summed up the situation. He remarked, "This is incredible. Less than a month ago you arrived on the docks of Rangoon with only a briefcase, and now you have a fighter group ready to fight."¹⁴⁸ Incredible only if not led by a military genius.

ENDNOTES

- ¹ Ralph McGill, *Army-Navy-Air Force Register* 79, no. 24 (August 9, 1958): 24.
- ² Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 112.
- ³ Robert B. Hotz et al., *With General Chennault: The Story of the Flying Tigers*, (New York: Coward-McCann, 1943), 60, 62.
- ⁴ Martha Byrd, *Chennault: Giving Wings to the Tiger*, (Tuscaloosa, AL: University of Alabama Press, 1987), 10-11.
- ⁵ *Ibid.*, xiii.
- ⁶ *Ibid.*, 19.
- ⁷ *Ibid.*, 1,2.
- ⁸ Hotz, 49.
- ⁹ Byrd, 21.
- ¹⁰ Hotz, 54.
- ¹¹ *Ibid.*, 55.
- ¹² Byrd, 24.
- ¹³ *Ibid.*, 25.
- ¹⁴ Hotz, 56.
- ¹⁵ Robert H. Shoemaker and Leonard A. Paris, *Famous American Generals*, (New York: Crowell, 1946), 166.
- ¹⁶ Byrd, 30.
- ¹⁷ *Ibid.*, 33.
- ¹⁸ Hotz, 59.
- ¹⁹ Robert L. Scott, *Flying Tiger: Chennault of China* (Garden City, NY: Doubleday, 1959), 9.
- ²⁰ Byrd, 39.
- ²¹ Hotz, 60.
- ²² Byrd, 41, 42.
- ²³ *American Mercury* 58, (April 1944): 404.
- ²⁴ McGill, 24.
- ²⁵ Shoemaker, 167.
- ²⁶ Byrd, 61.
- ²⁷ Message, CFB 28804, Chiang Kai-shek to Chennault, 10 December 1944.
- ²⁸ Clausewitz, 102.
- ²⁹ *American Mercury*, 405.
- ³⁰ Byrd, 29.

- ³¹ *American Mercury*, 402.
- ³² Hotz, 69.
- ³³ Byrd, 50.
- ³⁴ Hotz, 70.
- ³⁵ Byrd, 50.
- ³⁶ Hotz, 70.
- ³⁷ Bernard C. Nalty, *Tigers Over Asia* (New York: Dutton, 1978), 11.
- ³⁸ Robert M. Smith, *With Chennault in China: A Flying Tiger's Diary* (Blue Ridge Summit, PA: Tab Books Inc., 1984), 92.
- ³⁹ Hotz, 70.
- ⁴⁰ Hotz, 77.
- ⁴¹ Smith, 3.
- ⁴² Nalty, 12.
- ⁴³ Hotz, 77.
- ⁴⁴ *Ibid.*, 77, 78.
- ⁴⁵ Smith, 98.
- ⁴⁶ Jack Samson, *Chennault* (Garden City, NY: Doubleday, 1987), 45, 91.
- ⁴⁷ Claire Lee Chennault, *Way of a Fighter*, ed. Robert Hotz (New York: G. P. Putnam's Sons, 19), 83.
- ⁴⁸ *Ibid.*, 82.
- ⁴⁹ Smith, 93.
- ⁵⁰ Lt Colonel Jasper J. Harrington, interview with author, 4 February 1995.
- ⁵¹ Smith, 93.
- ⁵² Harrington interview.
- ⁵³ Smith, 93, 94, 97, 100.
- ⁵⁴ Memorandum, Major J. P. Harrison, AC/AS Intelligence, to Colonel J. Halverson, subject: Enemy Reaction to Heavy USAAF Attacks on Vital Targets in Japan, 3 July 1943.
- ⁵⁵ Memorandum, Thomas D. White, Assistant C/S Intel, to Commanding General AAF, subject: Defensibility and Vulnerability of Chengtu Bases, 28 January 1944.
- ⁵⁶ General C. J. Chow, Director, Commission on Aeronautical Affairs, Republic of China, to General C. L. Chennault, Commanding General, 14th Air Force, letter, subject: Condition of Air Warning Nets at Suichuan, Chihkiang, and Tangchuk, 21 August 1944.
- ⁵⁷ Colonel Y. T. Yeng, Commander, Fifth Route Air Force, Chinese Air Force, to General C. L. Chennault, Commanding General, 14th Air Force, subject: Air Defense Net Improvements, 29 August 1944.
- ⁵⁸ Bob Liles, letter to the author, 14 January 1995.
- ⁵⁹ Smith, 8.
- ⁶⁰ *Ibid.*, vii.
- ⁶¹ Shoemaker, 163.
- ⁶² Clausewitz, 108, 109.
- ⁶³ Colonel P. Y. Shu, Chinese Air Force, videotaped interview with Thomas W. Cotton, 1 June 1988.

- ⁶⁴ Chennault, 89.
- ⁶⁵ *Flying Tigers: American Volunteer Group, Chinese Air Force. A Brief History with Recollections and Comments by General Claire Lee Chennault*, undated, 2.
- ⁶⁶ Malcolm Rosholt, *Days of the Ching Pao* (Amherst, WI: Palmer Publications, Inc., 1978), 7.
- ⁶⁷ *Ibid.*
- ⁶⁸ Chennault, 110-111.
- ⁶⁹ Duane P. Schultz, *The Maverick War: Chennault and the Flying Tigers* (New York: St. Martin's Press, 1987), 112-113.
- ⁷⁰ Chennault, 112.
- ⁷¹ James H. Howard, *Roar of the Tiger* (New York: Orion Books, 1991), 87-88.
- ⁷² Daniel Ford, *Flying Tigers: Claire Chennault and the American Volunteer Group* (Washington, DC: Smithsonian Institution Press, 1991), 77.
- ⁷³ Samson, 78.
- ⁷⁴ Ford, 111.
- ⁷⁵ Samson, 79; Schultz, 114.
- ⁷⁶ Chennault, 113.
- ⁷⁷ Rosholt, 7.
- ⁷⁸ Shoemaker, 168.
- ⁷⁹ Nalty, 157.
- ⁸⁰ Byrd, 159.
- ⁸¹ Stanley M. Ulanoff, ed., *Fighter Pilot* (New York: Prentiss Hall, 1986), 148.
- ⁸² Rosholt, 7; Smith, 3.
- ⁸³ Shoemaker, 165.
- ⁸⁴ Ulanoff, 149.
- ⁸⁵ Hotz, 22.
- ⁸⁶ Ulanoff, 151.
- ⁸⁷ Chennault, 111.
- ⁸⁸ *Ibid.*, 179.
- ⁸⁹ Rosholt, 100.
- ⁹⁰ Chennault, 112.
- ⁹¹ General Bruce K. Holloway, USAF Oral History Interview, 16-18 Aug 1977, 70; and letter to the author, 11 January 95.
- ⁹² *Ibid.*, 70-71.
- ⁹³ David L. Hill, interview with the author, January 1995.
- ⁹⁴ Liles letter.
- ⁹⁵ John D. Rossi, letter to the author, 10 January 1995.
- ⁹⁶ Joe Summey, letter to the author, 9 January 1995.
- ⁹⁷ John Rosenbaum, letter to the author, 10 January 1995.
- ⁹⁸ David Rust, letter to the author, 22 December 1994.

- ⁹⁹ Ben Benetis, letter to the author, 17 December 1994.
- ¹⁰⁰ Earl Nash, interview with the author, 7 January 1995.
- ¹⁰¹ Don Lopez, letter to the author, 20 December 1994.
- ¹⁰² Charlie Cook, letter to the author, December 1994.
- ¹⁰³ Chennault, 131.
- ¹⁰⁴ Clausewitz, 101.
- ¹⁰⁵ *Ibid.*, 103-104.
- ¹⁰⁶ *Ibid.* 105-106.
- ¹⁰⁷ Byrd, 11.
- ¹⁰⁸ *Ibid.*, 242.
- ¹⁰⁹ *Ibid.*, 27.
- ¹¹⁰ Ford, 105.
- ¹¹¹ Hotz, 74.
- ¹¹² Byrd, 124.
- ¹¹³ Chennault, 218.
- ¹¹⁴ *Ibid.*, 240, 248.
- ¹¹⁵ Byrd, 159-160.
- ¹¹⁶ Harrington interview.
- ¹¹⁷ Byrd, 86.
- ¹¹⁸ Chennault, 57, 58.
- ¹¹⁹ Personnel (201) File, Claire L. Chennault, 1942-1945 (Maxwell AFB, AL: USAF Historical Research Agency, File 862.289A)
- ¹²⁰ *Ibid.*
- ¹²¹ *Ibid.*
- ¹²² Hill interview.
- ¹²³ Liles letter.
- ¹²⁴ Summey letter.
- ¹²⁵ Harrington interview.
- ¹²⁶ Robert T. Finney, *History of the Air Corps Tactical School - 1920-1940*. (Washington, DC: Center for Air Force History, 1992), 103-105, 120.
- ¹²⁷ *Ibid.*, 40.
- ¹²⁸ *Ibid.*, 75-76.
- ¹²⁹ *Ibid.*, 76.
- ¹³⁰ *Ibid.*, 77.
- ¹³¹ Harrington interview.
- ¹³² Finney, 76-77.
- ¹³³ *Ibid.*, 77.
- ¹³⁴ *Ibid.*

- ¹³⁵ Smith, 7.
¹³⁶ Chennault, 5.
¹³⁷ Byrd, xi, xii.
¹³⁸ *Ibid.*, 40.
¹³⁹ *Ibid.*, 50.
¹⁴⁰ Holloway history, 88, 89.
¹⁴¹ Charles Glanville, letter to the author, January 1995.
¹⁴² Rust letter.
¹⁴³ Chris Barrett, letter to the author, 7 January 1995.
¹⁴⁴ Chennault, 78.
¹⁴⁵ Clausewitz, 112.
¹⁴⁶ *Ibid.*, 100.
¹⁴⁷ *Ibid.*, 111.
¹⁴⁸ Ulanoff, 138.

BIBLIOGRAPHY

- Air Defense Net Improvements.* Letter, Colonel Y. T. Yeng, Commander, Chinese Fifth Route Air Force, to General C. L. Chennault, Commanding General, 14th Air Force, August 29, 1944. Maxwell AFB, AL: USAF Historical Research Agency.
- American Mercury* 58 (April 1944): 404-410.
- Appointment Notification.* Message (CFB 28804), Generalissimo Chiang Kai-shek to General Chennault, 10 December 1944. 14th Air Force Messages Radio File, July 1943 - July 1945. Maxwell AFB, AL: USAF Historical Research Agency. File 862.1621.
- Barrett, Chris S. Letter to the author, 7 January 1995.
- Benetis, Ben T. Letter to the author, 17 December 1994.
- Bolen, Ed. Letter to the author, 20 December 1994.
- Bond, Charles R. Jr. and Anderson, Terry. *A Flying Tiger's Diary*. College Station, TX: Texas A & M University Press, 1984.
- Brown, Joseph Jr. Letter to the author, 19 December 1994.
- Bullard, Judson D., Jr. Letter to the author, December 1994.
- Byrd, Martha. *Chennault: Giving Wings to the Tiger*. Tuscaloosa, AL: University of Alabama Press, 1987.

- Chennault, Claire Lee, as told to Glines, C. V. "Individualism: That Controversial Leadership Trait." *Air Force & Space Digest* 40 (November 1967), 104-109.
- _____. Personnel (201) File, 1942 -1945. Maxwell AFB, AL: USAF Historical Research Agency. File 862.289A.
- _____. *The Role of Defensive Pursuit*. Maxwell AFB, AL: Air University Library. Document number M-U 19850.
- _____. *Way of a Fighter*, edited by Robert Hotz. New York: G. P. Putnam's Sons, 1949.
- Clausewitz, Carl von. *On War*, edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1976.
- Cook, Charlie. Interviews with and letters to the author, December 1994, January 1995.
- Cotton, Thomas W. Letter to the author, 18 December 1994.
- Condition of Air Warning Nets at Suichan, Chihkiang, and Tangchuk*. Letter, General C. J. Chow, Director, Commission on Aeronautical Affairs, National Government, Republic of China, to General C. L. Chennault, Commanding General, 14th Air Force, August 21, 1944. Maxwell AFB, AL: USAF Historical Research Agency.
- Defensibility and Vulnerability of Chengtu Bases*. Memorandum, Thomas D. White, Assistant Chief of Staff, Intelligence, to Commanding General AAF, 28 January 1944. Maxwell AFB, AL: USAF Historical Research Agency.
- Enemy Reaction to Heavy USAAF Attacks on Vital Targets in Japan*. Memorandum, Major J. P. Harrison, AC/AS Intelligence, to Colonel J. Halverson, 3 July 1943. Maxwell AFB, AL: USAF Historical Research Agency.
- Fei Hu: The Story of the Flying Tigers*. Santa Barbara, CA: Fei Hu Films, 1993. (Videotape.)
- Finney, Robert T. *History of the Air Corps Tactical School 1920 -1940*. Washington, DC: Center for Air Force History, 1992.
- Flying Tigers: American Volunteer Group, Chinese Air Force. A Brief History with Recollections and Comments by General Claire Lee Chennault*. Undated. (Typewritten.)
- Ford, Daniel. *Flying Tigers: Claire Chennault and the American Volunteer Group*. Washington, DC: Smithsonian Institution Press, 1991.
- Fourteenth Air Force Newsletter, June 1956. (Typewritten.)
- Fourteenth Air Force Newsletter, July 1956. (Typewritten.)
- Gendreizig, Al. Letter to the author, 28 December 1944.
- Glanville, Charles R. Letter to the author, January 1995.
- Glass, Bryan P. Letter to the author, 24 December 1994.

Glenn, Brigadier General Edgar A. *Narrative on Experiences as Chief of Staff of 14th Air Force, March 1943 - December 1944*. Maxwell AFB, AL: USAF Historical Research Agency, File 862.13-1.

Goodworth, Art. Letter to the author. 28 December 1994.

Harrington, Lt Colonel Jasper J. Interview with author, 4 February 1995.

Hill, David. Interviews with author, 18 January 1995.

Holloway, General Bruce K. USAF Oral History Interview #K239.0512-955, 16-18 August 1977. Maxwell AFB, AL: USAF Historical Research Agency.

_____. Letter to the author, 11 January 1995.

Hotz, Robert B., et al. *With General Chennault: The Story of the Flying Tigers*. New York: Coward-McCann, 1943.

Howard, James H. *Roar of the Tiger*. New York: Orion Books, 1991.

Lee, J. L. Letter to the author, 27 December 1994.

Levy, Myron. Letter to the author, December 1994.

Liles, Bob. Letter to the author, 14 January 1995.

Little, Wallace H. Letter to the author. 17 December 1994.

Loofbourrow, Philip C. Letter to the author, 20 January 1995.

Lopez, Donald S. Letter to the author, 20 December 1994.

Manning, Clark. Letter to the author, 16 December 1994.

McGill, Ralph. *Army-Navy-Air Force Register* 79 (9 August 1958), 24.

Minella, Louis J. Letter to the author, December 1994.

Nalty, Bernard C. *Tigers over Asia*. New York: Dutton, 1978.

Nash, Earl S. Interview with author, 7 January 1995.

Quigley, Don L. Letter to the author, 20 December 1994.

Rosenbaum, John D. Letter to the author, 10 January 1995.

Rosholt, Malcolm. *Days of the Ching Pao*. Amherst, WI: Palmer Publications, Inc., 1978.

Rossi, John R. Letter to the author, 10 January 1995.

Rust, David H. Letter to the author, 22 December 1994.

Samson, Jack. *Chennault*. Garden City, NY: Doubleday, 1987.

Schultz, Duane P. *The Maverick War: Chennault and the Flying Tigers*. New York: St. Martin's Press, 1987.

Scott, Robert L. *Flying Tiger: Chennault of China*. Garden City, NY: Doubleday, 1959.

- Sho, Colonel P. Y. Videotaped interview with Thomas Cotton, 1 June 1988.
- Shoemaker, Robert H. and Paris, Leonard A. *Famous American Generals*. New York: Crowell, 1946.
- Smith, Robert M. *With Chennault in China: A Flying Tiger's Diary*. Blue Ridge Summit, PA: Tab Books, Inc., 1984.
- Summey, Joe. Letter to the author, 9 January 1995.
- Toland, John. *The Flying Tigers*. New York: Dell Publishing, 1963.
- Ulanoff, Stanley M., ed. *Fighter Pilot*. New York: Prentiss Hall, 1986.
- Weber, Louis W. Letter to the author, 18 December 1994.